ANACONDA Aluminum Division
Columbia Falls Reduction Plant
P.O. Box 10
Columbia Falls, Montana 59912
Telephone 406 892 3261

ANACONDA Industries

by mel ruder

Major goal for Anaconda's Columbia Falls plant was reached this year with reduction of fluoride emissions in line with Montana environmental standards.

In effect is compliance with a July 1, 1980 Montana Board of Health and Environmental Sciences directive that fluoride emissions be limited to 864 pounds per day. This compares with the average daily production of 900,000 pounds of aluminum.

An April interview by Michele Drake, senior editor of "Arco Spark" published by Atlantic Richfield Co. tells the story. Anaconda is a wholly owned Atlantic Richfield subsidiary.

The Drake story reads: Anaconda Industries' Aluminum Division had yet another major project under its belt. The $42.4 million, two-year installation of Sumitomo technology in its oldest aluminum reduction plant is complete.

As of the end of February all 600 cells where the aluminum is actually produced had been rebuilt in a modernization program designed to bring this 24 year-old plant in line with Montana environmental standards. The plant has been operating under a renewal of a variance from the state which is good until June 30.

Don McMillan, who had been project manager for Sumitomo conversion and is now in the new post of manager, planning and evaluation, summed up the preliminary results of the project.

"All environmental aspects of the project appear very promising. Other areas of performance, including energy consumption, chemical and carbon consumption and production output, are also looking good."

Although the project's primary purpose has been to bring the plant in line with Montana fluoride emission standards, the installation will also save electric energy reqired to produce molten aluminum from alumina ore. In addition, the Sumitomo installation should improve safety and industrial hygiene conditions for employees, improve production efficiency and cut carbon and chemical consumption. The Sumitomo process is named for the Japanese aluminum company which sold Anaconda the technology in 1976.

The project was originally expected to be complete by April 1. McMillan says the installation was finished a month ahead of schedule because the projected failure rate of cell rebuild was not as severe as originally projected.

He adds, "Finishing with cell rebuild is a major load off our back. Our schedule of rebuilding five pots a week was very demanding. Now our operators can fine-tune the Sumitomo production process."

Additional modernization efforts that will allow Columbia Falls to get the most out of the new Sumitomo technology continue. These include the purchase of ECL stud-pulling machines, first delivery of which is expected in November.

Also, a prototype of a new alumina vehicle has recently been received at the plant and is being tested by operators. The vehicle's advantages include better visibility for an operator, more even ore control, an enclosed cab for improved operator hygiene and a larger ore distribution capacity. If the new vehicle proves worthy, says McMillan, a decision will be made mid-year whether to purchase more like it.

More advanced technology may be added to the plant in the form of a new vacuum cleaning unit from Switzerland. The unit is designed to decrease particulate emissions from the roof of the plant and minimize particulate matter falling back into the anode. If these units are purchased and put in use-- Anaconda will be the first company to use them outside Europe. The vacuum cleaning units have been successfully tested by three Norwegian aluminum companies.

Being tested at the Columbia Falls Anaconda plant is an air monitoring system designed by ALCOA.

The system is widely accepted by aluminum companies as well as many state and federal agencies including the Environmental Protection Agency.

Late last April, Lee Smith, AAC technical operations manager, told Brian Kennedy, Hungry Horse News editor, "We have our pollution level to the point where we are approaching the accuracy limitations of the exsisting monitoring equipment."

Smith continued: "Our old sampling system has limitations.

This new air quality monitoring system being tested takes us down to another level of measurement."

Smith noted fluoride emissions at the plant during late April were averaging 738 pounds per day well under the state air quality standard of 864 pounds.

Meanwhile the state of Montana and Anaconda agreed to obtain an outside consultant to determine the company's compliance with air quality standards.